

IN THE CLAIMS:

Please cancel claims 1-12 without prejudice or disclaimer and substitute new claims 13-14 therefor.

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- 13. An isolated nucleic acid molecule selected from the group consisting of:
 - (a) a nucleic acid molecule that encodes a polypeptide comprising SEQ ID NO:4;
 - (b) a nucleic acid molecule that encodes a fragment of the polypeptide of SEQ ID NO:4, wherein the fragment binds to an IL-1 delta counterstructure;
 - (c) a nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid molecule of (a) or (b), wherein the hybridization conditions include 50% formamide and 6XSSC, at 42°C with washing conditions of 60°C, 0.5XSSC, 0.1% SDS, wherein the nucleic acid molecule encodes a polypeptide that binds to an IL-1 delta counterstructure; and
 - (d) a nucleic acid molecule of SEQ ID NO:3.
- 14. An expression vector comprising the nucleic acid molecule of claim 13.
- 15. A host cell comprising the expression vector of claim 14.
- 16. An isolated nucleic acid molecule selected from the group consisting of:

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- (a) a nucleic acid molecule that encodes a polypeptide comprising SEQ ID NO:2;
- (b) a nucleic acid molecule that encodes a fragment of the polypeptide of SEQ ID NO:2, wherein the fragment binds to an IL-1 delta counterstructure;
- (c) a nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid molecule of (a) or (b), wherein the hybridization conditions include 50% formamide and 6XSSC, at 42°C with washing conditions of 60°C, 0.5XSSC, 0.1% SDS, wherein the nucleic acid molecule encodes a polypeptide that binds to an IL-1 delta counterstructure; and
- (d) a nucleic acid molecule of SEQ ID NO:1.

17. An expression vector comprising the nucleic acid molecule of claim 16.

18. A host cell comprising the expression vector of claim 17.

19. A nucleic acid molecule that encodes a polypeptide that comprises an amino acid sequence that is at least 80% identical to SEQ ID NO:2, wherein the polypeptide binds to an IL-1 delta counterstructure.

20. An expression vector comprising the nucleic acid molecule of claim 19.

21. A host cell comprising the expression vector of claim 20.

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22. A nucleic acid molecule that encodes a polypeptide that comprises an amino acid sequence that is at least 80% identical to SEQ ID NO:4, wherein the polypeptide binds to an IL-1 delta counterstructure.
23. An expression vector comprising the nucleic acid molecule of claim 22.
24. A host cell comprising the expression vector of claim 23.
25. A polypeptide encoded by the nucleic acid molecule of claim 13.
26. A polypeptide encoded by the nucleic acid molecule of claim 14.
27. A polypeptide comprising amino acids 1-156 of SEQ ID NO:2.
28. A polypeptide comprising an amino acid sequence that is at least 80% identical to the polypeptide of claim 27, wherein the polypeptide binds to an IL-1 delta counterstructure.
29. A soluble fragment of the polypeptide of claim 27, wherein the soluble fragment binds to an IL-1 delta counterstructure.
30. A soluble fragment of the polypeptide of claim 28, wherein the soluble fragment binds to an IL-1 delta counterstructure.
31. A polypeptide comprising amino acids 1-155 of SEQ ID NO:4.
32. A polypeptide comprising an amino acid sequence that is at least 80% identical to the polypeptide of claim 31, wherein the polypeptide binds to an IL-1 delta counterstructure.
33. A soluble fragment of the polypeptide of claim 31, wherein the soluble fragment binds to an IL-1 delta counterstructure.

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34. A soluble fragment of the polypeptide of claim 32, wherein the soluble fragment binds to an IL-1 delta counterstructure.
35. A method for producing a polypeptide, the method comprising culturing a host cell of claim 15 under conditions that promote expression of the polypeptide.
36. A method for producing a polypeptide, the method comprising culturing a host cell of claim 18 under conditions that promote expression of the polypeptide.
37. An antibody that binds to the polypeptide of claim 27.
38. The antibody of claim 37, wherein the antibody is a monoclonal antibody.
39. An antibody that binds to the polypeptide of claim 31.
40. The antibody of claim 39, wherein the antibody is a monoclonal antibody.
41. A kit for the determination of the molecular weights of peptide fragments of a sample protein comprising the following:
 - a vessel;
 - the polypeptide of claim 31;
 - at least one enzyme selected from the group consisting of Asparaginylendopeptidase, Arginylendopeptidase, *Achromobacter* protease I, Trypsin, *Staphylococcus aureus* V8 protease, Endoproteinase Asp-N, and Endoproteinase Lys-C;